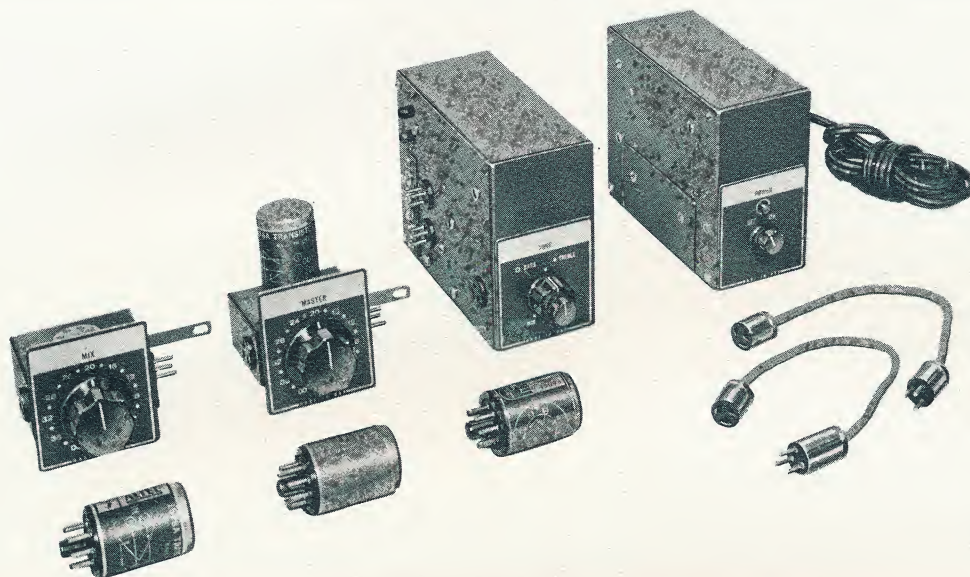


Quick Connect Solid State Modules

**SOLID
STATE
MODULES**



Features:

All Solid State
No Interconnecting
Wiring Required
Side-by-Side Plug-in Modules
Wide Range Frequency Response
Extremely Low Noise Level
High Reliability and
Low Maintenance
Economical and Versatile
Plug-in Microphone Preamplifier,
Equalizer Preamplifier (Phono),
or Line Transformer
Rugged and Compact
Special Grounding Strap
and Circuit-to-Chassis
Ground Provisions
Minimum Heat Generation
Rack Panel Mounting
Optional Installation Provisions
for Making Tone Controls
and Power Switch Inaccessible
Meets FCC Requirements
For FM Broadcast
Small Space Requirements for
Custom Control Consoles

**AUDIO AMPLIFICATION SYSTEMS • MUSIC AND PUBLIC ADDRESS
SYSTEMS FOR • SCHOOLS • THEATRES • CHURCHES
• AUDITORIUMS • STADIUMS • OFFICES • CLUBS • RESTAURANTS
• SHOPPING CENTERS • MILITARY SYSTEMS**

The Altec Quick Connect Solid State Modules consist of four basic units and their accessories. These components may be arranged to create versatile audio amplification systems in a variety of combinations — from the most elementary to the very complex — simply by making plug-in connections. No time-consuming wiring is required. The side-by-side plug-in design of the Quick Connect Solid State Modules — plus the convenience of the plug-in accessory preamplifiers and transformers — allows a flexibility of operation and a simplicity of installation adaptable to virtually any application, insuring a maximum of quality and flexibility for a minimum investment in money, space and labor.

The basic components of the Altec Quick Connect Solid State Modules are the 14799A Mixer Control Assembly, the 14800A Booster and Master Gain Control Assembly, the 1581A Line Amplifier and Tone Control Assembly, and the 1576A Power Supply. Accessories include the 1578A Transistor Preamplifier (for microphones), the 1579A Equalizer Transistor Preamplifier (for magnetic phono pickups), the 15095 Line Transformer, the 14953 Cables, the 14731A Dial Marker Kit, and the 1580A Mounting Assembly for Rack Mounting. All basic components (14799A, 14800A, 1581A and 1576A) are designed for single-hole panel mounting and, since they are all the same width (2 1/2"), up to 6 may be mounted in the 1580A which is a standard 19" rack mounting assembly and occupies 5 1/4" of vertical space. Optional installation procedures permit the Line Amplifier and the Power Supply to be mounted at the rear of the Assembly.

The wide frequency range, low distortion and exceptionally low noise of the Quick Connect Solid State Modules permit complete design flexibility for audio systems that require custom assembly. The various units of the Quick Connect Solid State Modules may be used to complement or expand existing systems, or to form new ones. An installation may be engineered to meet the current requirements, yet allow for future expansion merely by adding equipment for new inputs and/or outputs as the need arises. The sturdy compactness and plug-in design of the Modules make them exceptionally adaptable for functional custom consoles, capable of limitless mixing inputs in multiples of ten (including one mixer which serves as a submaster) or less.

Additional monetary savings are afforded by the unique design of the Altec 1578A plug-in Transistor Preamplifier which eliminates the need for the microphone transformer usually required for use with low-impedance microphones.

Grounding straps at the rear of the mixer and the master gain control assemblies assure unit-to-unit ground integrity, and protect against extraneous noise pickup, RF pickup, and parasitic oscillations. A link on the terminals of the master gain control assembly provides a convenient means of establishing a circuit-to-chassis ground and aids in preventing possible establishment of ground loops.

The Altec Quick Connect Solid State Modules are economical — both in initial outlay and maintenance costs — and reliable; and answer the need for a truly versatile solid state audio amplification system.



A Division of **SPV** Ling Altec, Inc.

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DESCRIPTIONS

14799A MIXER CONTROL ASSEMBLY

The 14799A mixer is a side-by-side plug-in unit containing a rotary attenuator and an isolating resistor, and with an octal socket to accommodate the plug-in accessory preamplifier or transformer. The mixer has three principal applications, dependent upon the plug-in accessory used. For low-level microphone input, an Altec 1578A preamplifier is needed. The Altec 1579A preamplifier is required for magnetic phono pickup input, and the 15095 line transformer is used for high-level balanced line-to-mixer application. In some applications one mixer may serve as a "submaster" for a group of mixers. Input to the mixer is made at screw terminals at the rear of the unit. A copper grounding strap, also at the rear, attaches to the adjoining plug-in unit. Output and power connections are made with two 3-pin connectors, a plug on one side of the mixer and a socket on the other. These connectors engage with additional mixers and/or a 14800A Booster and Master Gain Control Assembly. Like all Quick Connect Solid State Modules, the mixer is single-hole panel mounting, attaching to the mounting panel by means of the bushing on the control shaft.

14800A BOOSTER AND MASTER GAIN CONTROL ASSEMBLY

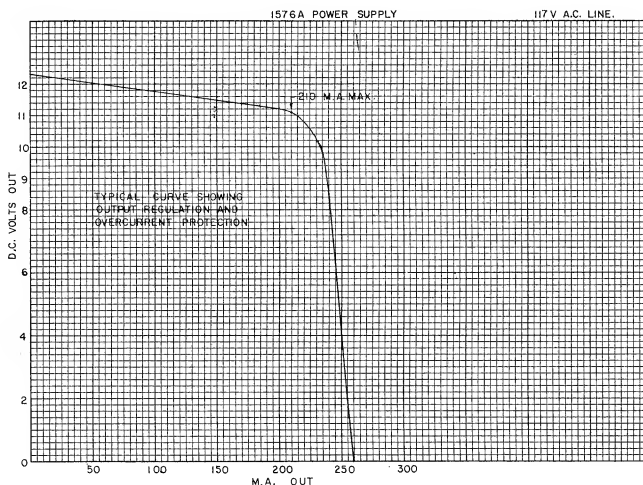
The 14800A master connects with a 1581A Line Amplifier and Tone Control Assembly by side-by-side plug-in (or 14953 cables). The master includes a plug-in 1578A preamplifier for the booster function, and will handle the output and control the overall gain from up to ten 14799A mixers. A circuit-to-chassis grounding link is provided on the terminal strip at the rear of the unit. A grounding strap attaches to the adjoining plug-in unit. Input to the master is by means of side-by-side plug-in (or cable) connections from one or more mixers.

1581A LINE AMPLIFIER AND TONE CONTROL ASSEMBLY

The 1581A line amplifier is a compact, all-transistor unit designed to equalize the signal from the master. Dual concentric knobs on the front provide for bass and treble control. Input connections are made with side-by-side plug-in

1576A POWER SUPPLY

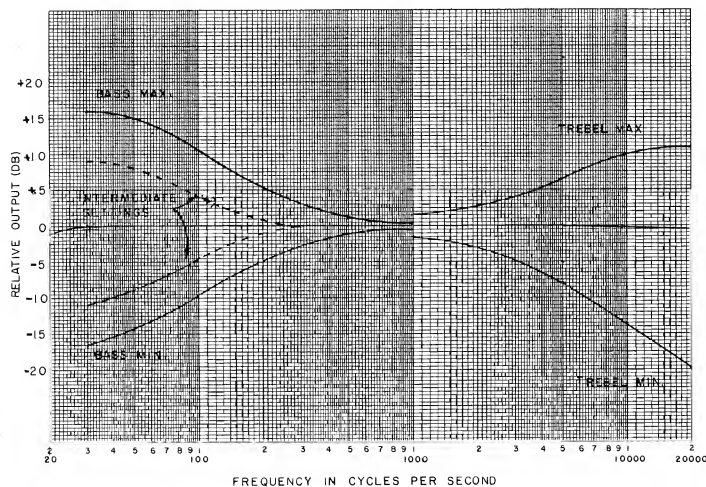
The 1576A power supply is a compact unit utilizing silicon rectifiers and transistors, and a zener diode. Producing 12v dc (210 ma maximum), the power supply is protected from overload by electronic current limiting and a self-resetting circuit breaker in the primary. Output connections are made with two 14953 cables (furnished with the unit). Either outlet can supply the full rated current, or it may be divided between them. Permissible load combinations for one supply are: two 1581A line amplifiers; or, one 1581A line amplifier, one 14800A master and up to ten 14799A mixers equipped with plug-in preamplifiers; or, up to sixteen mixers equipped with plug-in preamplifiers. The power supply may be either panel or shelf mounted.



1576A Power Supply, Output Regulation and Overcurrent Protection

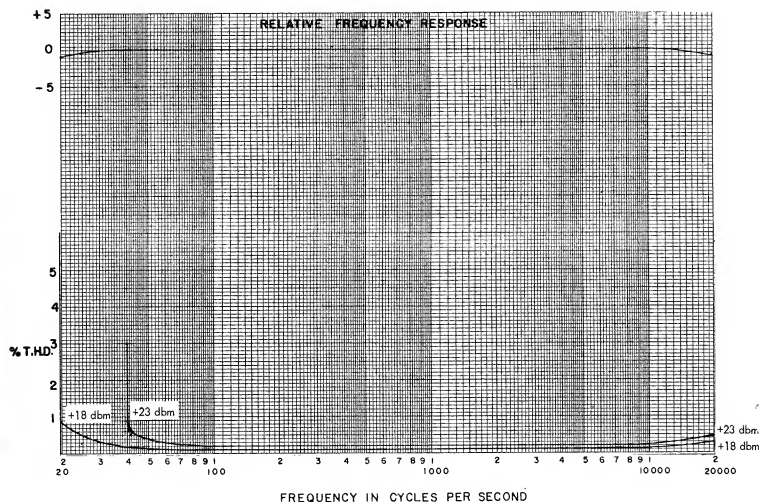
(or cable) connections. Power connections are made through two 3-pin plugs and two cables from the power supply. Output connections are made from a four-post terminal strip which may be strapped for either 150 or 600 ohms output. The 1581A may be either panel or shelf mounted.

1581A LINE AMPLIFIER
TONE CONTROLS



1581A Amplifier, Tone Controls

1581A LINE AMPLIFIER

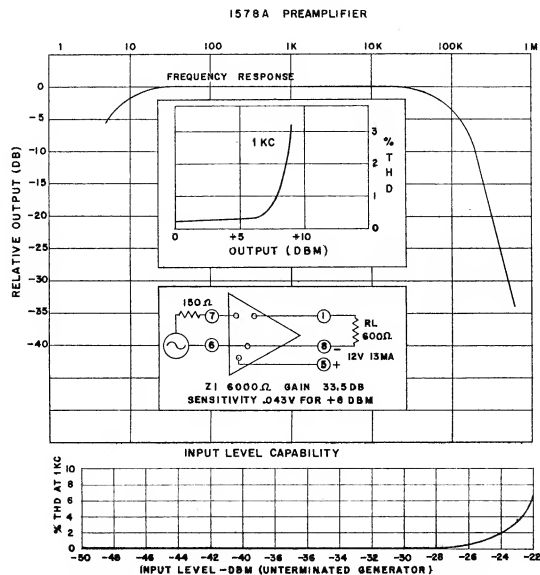


1581A Amplifier, Frequency Response

ACCESSORIES

1578A TRANSISTOR PREAMPLIFIER

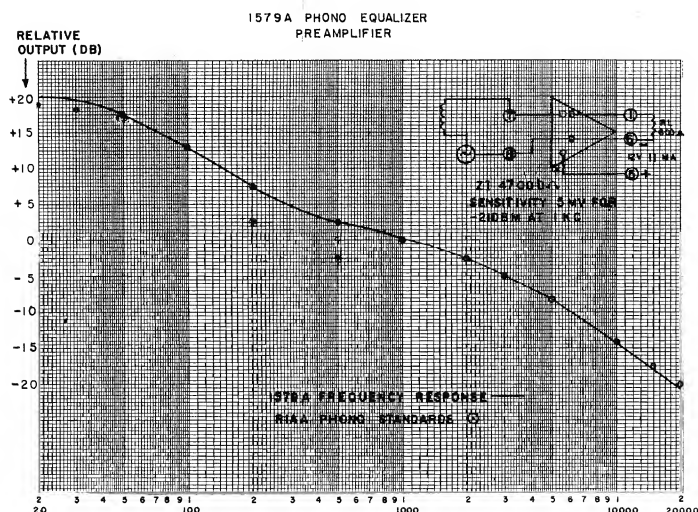
The 1578A is a plug-in preamplifier used for low-level microphone input with the mixers, and as the booster in the 14800A master. The preamplifier has a gain of 33.5 db and sensitivity is 43 millivolts rms for an output of +8 dbm. Frequency response is ± 0.5 db from 20 to 20,000 cps; or ± 1.5 db from 15 to 50,000 cps. Source impedance is 150 ohms nominal, usable from 30 to 20,000 ohms. Equivalent input noise is -122 dbm. The 1578A requires 12 v dc at 13 ma.



1578A Preamplifier, Performance Characteristics

1579A EQUALIZED TRANSISTOR PREAMPLIFIER

The 1579A preamplifier is designed for use with magnetic phono pickups and will equalize them to meet the RIAA standard. Sensitivity is 5 millivolts for 70 millivolt output at 1 kc. Output is +8 dbm at less than 0.5% thd. Input impedance is 47,000 ohms and the power required is 12 v dc at 11 ma.



1579A Preamplifier, Frequency Response

15095 LINE TRANSFORMER

The 15095 is a 15,000 to 600 ohm line transformer and may be used in a mixer for bridging a balanced 600-ohm line. The 600-ohm winding feeds the mixer bus and the 15,000-ohm winding bridges the source. With the connection of a 680-ohm resistor across the mixer input terminals, the transformer may be used for terminating purposes. It has 30 db of electro-magnetic shielding and a frequency response of ± 1 db from 30 to 20,000 cps.

1580A MOUNTING ASSEMBLY FOR RACK MOUNTING

The 1580A assembly will accommodate up to six units of the Quick Connect Solid State Modules by means of single-hole panel mounting. Screw holes in the bottom of the line amplifier and the power supply will line up with holes in the tray, permitting these two units to be attached with screws in addition to the panel mounting, if desired. An optional arrangement permits the power supply and the line amplifier to be mounted at the rear of the tray where the tone controls and the switch on the power supply may be made inaccessible. The 1580A assembly occupies 5 1/4" of rack space and weighs 4 1/2 pounds.

14953 CABLES

Two 14953 Cables are furnished with each 1576A power supply and are used to make connections between the power supply and other units, or to make short interconnections between various units, as the installation requires. Each 3-wire cable is 12 inches in length, and terminated with a 3-pin plug at one end and a 3-pin socket at the other.

14731A DIAL MARKER KIT

The Dial Marker Kit provides an adjustable reference for setting the controls on the various Quick Connect Solid State Modules. Each kit consists of five clear plastic discs which mount against the panel under the control knob. Although they may be rotated to change the position of the indicator line on the disc, they are spring-loaded to prevent any inadvertent alteration in the setting.

SPECIFICATIONS

14799A MIXER CONTROL ASSEMBLY

| | |
|-----------------------|---|
| Controls: | Mixer control |
| Connections: | (Input) 3 screw terminals (Output and Power) 3-pin plug and 3-pin socket |
| Accessory Connection: | Octal socket for plug-in option |
| Escutcheon Plate: | Dial plate furnished |
| Mounting: | Single-hole panel mounting |
| Dimensions: | 3 $\frac{3}{4}$ " H x 2 $\frac{1}{2}$ " W x 2 $\frac{1}{4}$ " D (including plug-in option, but excluding knob and connectors) |
| Color: | Green |
| Weight: | 7 oz. (excluding plug-in option) |

14800A BOOSTER AND MASTER GAIN CONTROL ASSEMBLY

| | |
|----------------------|--|
| Gain: | +27 db voltage gain with 1000 Ω termination |
| Power Requirements: | 12 v dc at 13 ma |
| Controls: | Master gain control |
| Connections: | (Input) 3-pin socket (Output and Power) 3-pin plug |
| Mounting: | Single-hole panel mounting |
| Escutcheon Plate: | Dial plate furnished |
| Dimensions: | 3 $\frac{3}{4}$ " H x 2 $\frac{1}{2}$ " W x 2 $\frac{1}{4}$ " D (including booster amplifier, but excluding knob and connectors) |
| Color: | Green |
| Weight: | 8 $\frac{1}{2}$ oz. (including booster amplifier) |
| Equipment Furnished: | 1578A Transistor Preamplifier (plug-in) furnished as booster amplifier |
| Features: | Link on terminals at rear of unit permits establishment of circuit-to-chassis ground. |

1581A LINE AMPLIFIER AND TONE CONTROL ASSEMBLY

| | |
|---------------------|--|
| Gain: | 47.5 db from 600 Ω generator |
| Input Sensitivity: | 0.098 v for +23 dbm output |
| Power Output: | +23 dbm at less than 1% thd, 45-20,000 cps +18 dbm at less than 0.5% thd, 25-20,000 cps |
| Frequency Response: | ± 1 db from 20 to 20,000 cps |
| Source Impedance: | Up to 1000 Ω |
| Load Impedance: | 150 or 600 Ω , ungrounded (center tap available in 600 Ω connection) |
| Noise Level: | -61 dbm with 1000 Ω input termination |
| Controls: | Concentric bass and treble controls |
| Power Requirements: | 12 v dc at 70 ma |
| Connections: | (Input) 3-pin socket (Output) 4 screw terminals (Power) 2 3-pin plugs |
| Test Facilities: | 2 meter test jacks on connector side of unit |
| Mounting: | Single-hole panel mounting, or shelf mounting |
| Escutcheon Plate: | Dial plate furnished |

| | |
|-------------|---|
| Dimensions: | 4 $\frac{1}{2}$ " H x 2 $\frac{1}{2}$ " W x 5 $\frac{1}{2}$ " D (excluding knob and connectors) |
| Color: | Green |
| Weight: | 1 $\frac{1}{2}$ lbs. |

1576A POWER SUPPLY

| | |
|-------------------|---|
| Power Output: | 12 v dc, 210 ma maximum |
| Regulation: | (Line) 10%, 110 to 135 v ac, 210 ma load (Load) 10%, no load to full load |
| Controls: | Rotary ON-OFF switch on front panel |
| Ripple: | 0.3 mv peak to peak |
| Power Input: | 117 v ac, 50 to 60 cps. 8 watts at full load |
| Load Connections: | 2 3-pin sockets (210 ma load current available from outputs in any combination) |
| Protection: | (Line) Self resetting circuit breaker in primary (Load) Electronic current limiting protects regulator against overcurrent |
| Mounting: | Single-hole panel mounting, or shelf mounting |
| Escutcheon Plate: | Dial plate furnished |
| Dimensions: | 4 $\frac{1}{2}$ " H x 2 $\frac{5}{8}$ " W x 5 $\frac{1}{2}$ " D (excluding knobs and connectors) |
| Color: | Green |
| Weight: | 2 $\frac{1}{2}$ lbs. |

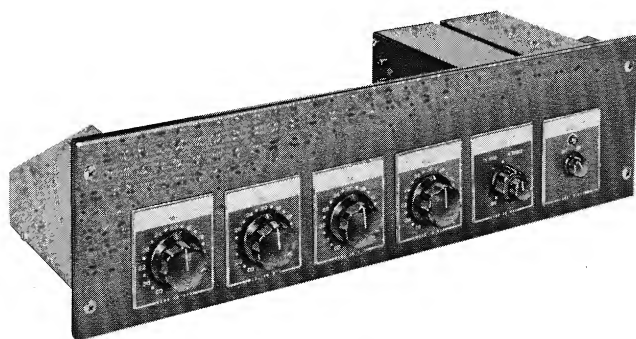
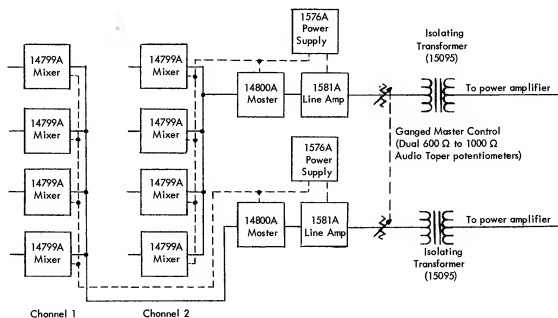
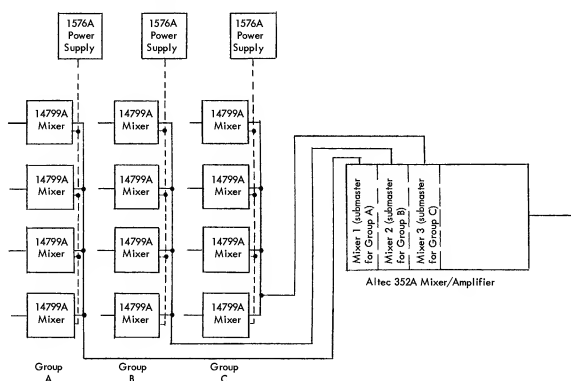
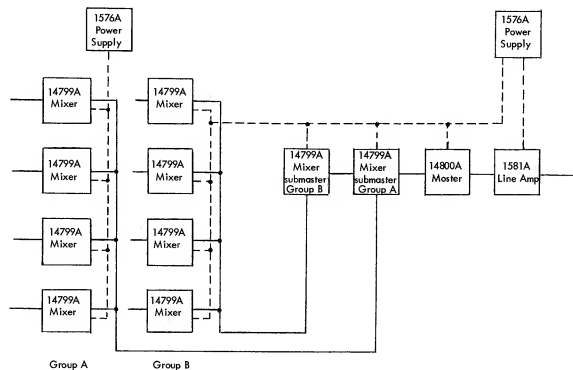
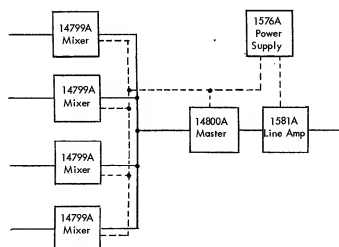
1578A TRANSISTOR PREAMPLIFIER (PLUG-IN ACCESSORY)

| | |
|---------------------|---|
| Gain: | 33.5 db |
| Sensitivity: | 43 millivolts rms for +8 dbm output |
| Frequency Response: | ± 0.5 db from 20 to 20,000 cps, or ± 1.5 db from 15 to 50,000 cps |
| Source Impedance: | 150 Ω , nominal, usable 30 to 20,000 Ω |
| Load Impedance: | 600 Ω |
| Noise Level: | -122 dbm equivalent input noise |
| Power Requirements: | 12 v dc at 13 ma |
| Mounting: | Standard octal socket |
| Dimensions: | 1 $\frac{5}{16}$ " diameter x 1 $\frac{13}{16}$ " seated height |
| Weight: | 1 oz. |

1579A EQUALIZER TRANSISTOR PREAMPLIFIER (PLUG-IN ACCESSORY)

| | |
|---------------------|---|
| Sensitivity: | 5 millivolts for 70 millivolt output at 1 kc |
| Power Output: | +8 dbm at less than 0.5% thd |
| Frequency Response: | Equalized to meet RIAA standard for magnetic phono pickup (see curve) |
| Source Impedance: | 47,000 Ω |
| Load Impedance: | 600 Ω |
| Power Requirements: | 12 v dc at 11 ma |
| Mounting: | Standard octal socket |
| Dimensions: | 1 $\frac{5}{16}$ " diameter x 1 $\frac{13}{16}$ " seated height |
| Weight: | 1 oz. |

TYPICAL APPLICATIONS



Altec Quick Connect Solid State Modules

ORDERING INFORMATION

Although the requirements of each individual installation will vary, the following information will serve as a guide to the purchaser in ordering Altec Quick Connect Solid State Modules.

| | |
|--|--|
| For each microphone input: | Order 1 - 14799A Mixer Control Assembly 1 - 1578A Transistor Preamplifier |
| For each magnetic phono pickup input: | Order 1 - 14799A Mixer Control Assembly 1 - 1579A Equalizer Transistor Preamplifier |
| For each line input: | Order 1 - 14799A Mixer Control Assembly 1 - 15095 Line Transformer |
| For a system of up to 10 inputs and line level outputs: | In addition to input requirements stated above — Order 1 - 14800A Booster and Master Gain Control Assembly 1 - 1581A Line Amplifier and Tone Control Assembly 1 - 1576 Power Supply |
| For each addition mixer group: (Maximum - 9 inputs) | Order 1 - 14799A Mixer Control Assembly (to serve as 'Submaster') 1 - 1576A Power Supply |
| *For each additional channel: | Order 1 - 14800A Booster and Master Gain Control Assembly 1 - 1581A Line Amplifier and Tone Control Assembly 1 - 1576A Power Supply |
| For each 6 Modules (or less) intended for 19-inch rack panel mounting: | Order 1 - 1580A Mounting Assembly for Panel Mounting |
| For each group of 5 mixers and/or masters: | Order 1 - 14731A Dial Marker Kit |

* For stereo systems, the addition of a dual 600Ω to 1000Ω audio taper potentiometer is required.

A custom (mixer) (console) (select one) shall be assembled in a workmanlike manner, and shall be composed of side-by-side plug-in modules, with provisions for plug-in preamplifiers, booster and line amplifiers, and transformers. All units shall employ solid-state devices only. Units requiring interconnecting wiring for power, signal input and/or output, or utilizing vacuum tubes, shall not be acceptable. The system shall consist of — mixer assemblies which shall be capable of mixing the input signals originating from — microphone(s), — phono pickup(s), — radio tuner(s), — tape machine(s), or equivalents. All input wiring shall terminate at screw-type terminal strips provided for each separate input. There shall be a 750 Ω potentiometer with audio taper and proper build-out resistor for each input and a socket provided for various types of plug-in accessories which shall provide proper termination of input lines to each mixer module and which shall be capable of accepting signals from low level, low-impedance sources, magnetic phono pickups, and bridged low-impedance lines. A booster amplifier and master gain control assembly shall amplify and control the gain of the combined signals from the mixers. The booster function shall be provided by a plug-in transistor preamplifier. A separate line amplifier shall have concentric tone controls for the bass and treble tones.

— separate power supply (ies), operating from 120 v ac, shall be capable of powering the installation and (each) shall provide a total output of 12 v dc at no less than 210 ma. Unit-to-unit ground integrity between mixer and master assemblies shall be by the use of a copper grounding strap of not less than $\frac{3}{16}$ of an inch wide. Circuit-to-chassis ground shall be made on the booster and master gain control module.

14799A MIXER CONTROL ASSEMBLY

The mixer control assembly shall be of the side-by-side plug-in type utilizing 3-pin plugs and sockets to accomplish all power and output functions, and to minimize the physical separation of assemblies to not more than $\frac{1}{4}$ inches. The module shall provide an octal socket for accommodation of selected preamplifier and/or transformers of the plug-in variety, specified elsewhere. The circuitry shall include a 750 Ω potentiometer and a 820 Ω isolating resistor for mixing purposes. Input wiring shall terminate at a three-post terminal strip, one terminal of which shall be attached to copper grounding strap of not less than $\frac{3}{16}$ inches in width to insure unit-to-unit ground integrity. The mixer module shall be of the single-hole panel mounting type and shall use the bushing of the control shaft to secure it in position on the panel. The module shall not occupy more than 3 $\frac{3}{4}$ " in height, 2 $\frac{1}{2}$ " in width, and 2 $\frac{1}{4}$ " in depth, including the optional plug-in accessory, but excluding the knob and connectors; and shall not weigh more than 7 ounces, excluding the plug-in accessory.

Any mixer control assembly not meeting all these requirements shall be deemed unacceptable under these specifications.

The mixer shall be Altec Lansing Model 14799A.

14800A BOOSTER AND MASTER GAIN CONTROL ASSEMBLY

The booster and master gain control assembly shall be of the side-by-side plug-in type utilizing 3-pin plugs and sockets to accomplish all power, input and output functions, and to minimize the physical separation of units to no more than $\frac{1}{4}$ inch; and shall provide an octal socket to accommodate a transistor preamplifier of the plug-in variety, specified elsewhere, to serve the booster function. The circuitry shall include a 750 Ω potentiometer and a 1000 Ω resistor for gain control purposes. A copper grounding strap of not less than $\frac{3}{16}$ inch in width shall insure unit-to-unit ground integrity, and the circuit-to-chassis ground shall be established by means of a terminal link at the rear of the module. Common chassis ground or ground wire will not be acceptable under these specifications. The assembly shall have a voltage gain of +25 db with a 1000 Ω termination, and shall have a power requirement of 12 v dc at not more than 13 ma. The master module shall be of the single-hole panel mounting type and shall use the bushing of the control shaft to secure it in place on the panel. It shall not occupy more than 3 $\frac{3}{4}$ " in height, 2 $\frac{1}{2}$ " in width, and 2 $\frac{1}{4}$ " in depth including the plug-in preamplifier but excluding knobs and connectors, and shall not weigh more than 8 $\frac{1}{2}$ ounces, including the plug-in preamplifier. Any booster and master gain control assembly not meeting all these requirements shall be deemed unacceptable under these specifications.

The master assembly shall be Altec Lansing Model 14800A.

1581A LINE AMPLIFIER AND TONE CONTROL ASSEMBLY

The line amplifier and tone control assembly shall be of the side-by-side plug-in type utilizing 3-pin plugs and sockets, or optional 3-wire cable connections, to accomplish all power and input functions; and shall employ only solid-state devices. Output shall be from a 4-post terminal board which shall have provisions for optional 150 Ω or 600 Ω output with a center tap available on the 600 Ω connection. The unit shall have a gain of

not less than 47.5 db from a 600 Ω generator, a power output of not less than +23 dbm at not more than 1% thd from 45 to 20,000 cps; or +18 dbm at not more than 0.5% thd from 25 to 20,000 cps; and input sensitivity of 0.098 v for a +23 dbm output. The module shall have a frequency response of ± 1 db from 20 to 20,000 cps, and a source of impedance of up to 1000 Ω . Noise level shall be no more than -61 dbm with a 1000 Ω termination, and the module shall have a power requirement of 12 v dc at not more than 70 ma. The unit shall have dual concentric knobs with the larger, outer knob for bass control and a smaller, inner knob for treble control, and two meter test jacks shall be provided for test facilities. The module shall be not more than 4 $\frac{1}{2}$ " in height, 2 $\frac{1}{2}$ " in width and 5 $\frac{1}{2}$ " in depth, excluding knob and connectors, and shall weigh not more than 1 $\frac{1}{2}$ pounds. The unit shall be of the single-hole panel mounting type and shall use the bushing of the control shaft to secure it in place on the panel, and it shall have provisions for optional shelf mounting.

Any line amplifier and tone control assembly not meeting all these requirements shall be deemed unacceptable under these specifications.

The line amplifier and tone control assembly shall be Altec Lansing Model 1581A.

1576A POWER SUPPLY

The power supply shall deliver 12 v dc and shall employ only solid-state devices. Protection against overcurrent shall be provided by electronic current limiting and by a self resetting circuit breaker in the primary. The unit shall maintain regulation within 10% no load to full load and/or 110 to 135 v ac, and with not more than 0.3 mv peak-to-peak ripple. Output shall be from two 3-pin sockets which shall provide a load current of not less than 210 ma in any combination. A rotary ON-OFF switch and a 'switch-on' indicator light shall be provided on the front of the module. The power supply shall not occupy more than 4 $\frac{1}{2}$ " in height, 2 $\frac{1}{16}$ " in width, and 5 $\frac{1}{2}$ " in depth, excluding knobs and connectors, and shall not weigh more than 2 $\frac{1}{2}$ pounds. The module shall be single-hole panel mounting, and shall have provisions for optional shelf mounting.

Any power supply not meeting these requirements shall be deemed unacceptable under these specifications.

The power supply shall be Altec Lansing Model 1576A.

1578A TRANSISTOR PREAMPLIFIER

The microphone preamplifier shall be a solid-state, plug-in unit encased in a mu-metal shield and requiring 12 v dc at 13 ma. The preamplifier shall have a gain of 33.5 db and a sensitivity of 43 millivolts rms for a +8 dbm output. It shall be capable of reproducing a frequency range of 20 to 20,000 cps within ± 0.5 db, and maintain a noise level of -122 dbm (equivalent input noise). Source impedance shall be 150 Ω , nominal, usable from 30 to 20,000 Ω ; and load impedance shall be 600 Ω . The unit shall mount in a standard eight-pin octal socket, and shall not measure more than 1 $\frac{5}{16}$ " in diameter and 1 $\frac{3}{16}$ " in seated height; and shall not weigh more than 1 ounce.

Any microphone preamplifier not meeting all these requirements shall be deemed unacceptable under these specifications.

The preamplifier shall be Altec Lansing Model 1578A.

1579A EQUALIZER TRANSISTOR PREAMPLIFIER

The equalizer preamplifier for magnetic phono pickups shall be a solid-state, plug-in unit encased in a mu-metal shield and requiring 12 v dc at 11 ma. Distortion of the equalizer preamplifier shall not exceed 0.5% thd at +8 dbm output power, and shall have a sensitivity of 5 millivolts for a 70 millivolt output at 1 kc. The frequency response shall be equalized to meet RIAA standards for a magnetic phono pickup. Source impedance shall be 47,000 Ω , and load impedance shall be 600 Ω . The unit shall mount in a standard eight-pin octal socket, and shall not measure more than 1 $\frac{5}{16}$ " in diameter and 1 $\frac{3}{16}$ " in seated height; and shall not weigh more than 1 ounce.

Any preamplifier not meeting all these requirements shall be deemed unacceptable under these specifications.

The equalizer preamplifier shall be Altec Lansing Model 1579A.

15095 LINE TRANSFORMER

The line transformer shall be a 15,000 to 600 Ω line transformer with a source impedance of 15,000 Ω and a load impedance of 600 Ω . It shall have a frequency response of ± 1 db from 30 to 20,000 cps. It shall be equipped with 30 db of electro-magnetic shielding. The transformer shall not measure more than 1 $\frac{5}{16}$ " in diameter and 1 $\frac{3}{16}$ " in seated height, and shall not weigh more than 1 ounce.

Any line transformer not meeting these requirements shall be deemed unacceptable under these specifications.

The line transformer shall be Altec Lansing Model 15095.

NOTICE
 We recommend that you obtain your Altec products from factory trained authorized Altec Sound Contractors and Distributors. This will assure you of proper installation, a continuing source of knowledgeable advice, service, and quick warranty protection.